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## ABSTRACT

This publication contains statewide standards for the civil engineering program in Georgia. The standards are divided into 12 categories: foundations (philosophy, purpose, goals, program objectives, availability, evaluation); admissions (admission requirements, provisional admission requirements, recruitment, evaluation and planning); program structure (curriculum design, program numbering system, program consistency, exit points, credentials, course code, course consistency, course sequence, electives, course transferability); program evaluation and planning (program evaluation; program planning; enrollment, graduation, and placement levels; attrition levels; student performance); instructional program (course content; course objectives; course instruction; occupation-based instruction; evaluation of students; grading system; laboratory management; equipment, supplies, and materials; physical facility); academic skills (academic requirements); employability skills (job acquisition, job retention and advancement); staff (faculty qualifications and responsibilities); advisory committee (function, membership, meetings); special needs (commitment); equity (commitment); and health and safety (commitment). Each standard consists of these components: standard statement, explanatory comment, and evaluative criteria. (NLA)

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# **CIVIL ENGINEERING TECHNOLOGY PROGRAM STANDARDS**

**Developed and Produced  
Under Contractual Agreement with**

**Georgia Board of  
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660 South Tower  
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Atlanta, Georgia 30303-2705  
1990**

# **CIVIL ENGINEERING TECHNOLOGY PROGRAM STANDARDS**

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## ACKNOWLEDGEMENTS

The development of Civil Engineering Technology program standards is a significant step for technical education and economic development in Georgia. These standards represent a statewide commitment to provide consistent, quality technical education, to equip our graduates with the background and skills necessary to meet their individual occupational needs, and to meet the currently expanding needs of the Georgia employment market.

Many people have contributed time, effort, and expertise to the standards development project. The Georgia Board of Technical and Adult Education, the Board's Standards Committee, the standards development committee, and the project staff have worked diligently to make the establishment of these standards a reality. Robert Mabry and John Lloyd of the Georgia Department of Technical and Adult Education have provided initiative and direction for the project. Russell Meade contributed significantly to the initial effort to develop standards for all programs. Patt Stonehouse, Director of Instructional Services, has provided invaluable assistance in planning and monitoring the project.

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We extend sincere thanks to each member of the Board's Standards Committee below.

Judy Hulse  
Carrollton

Louis Rice  
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Walter Sessoms, Chairman  
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Atlanta

Without the close cooperation of the civil engineering profession in Georgia, this program standard would not have been possible. We recognize and thank each member of the Civil Engineering Technology program State Technical Committee for their invaluable contribution to the development of the program standards.

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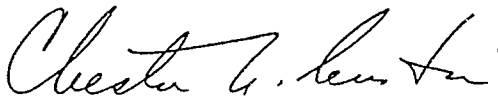
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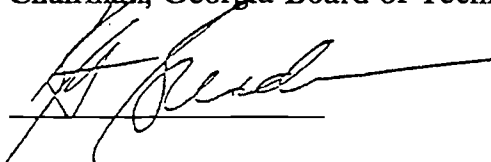
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Chester A. Austin

Chairman, Georgia Board of Technical and Adult Education



Ken Breeden

Commissioner, Georgia Department of Technical and Adult Education

# CIVIL ENGINEERING TECHNOLOGY PROGRAM STANDARDS

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## HOW TO USE THIS MANUAL

### **Tab Dividers**

This document is divided into sections, each section being divided from the others by means of a section-identifier tab. Each section contains standard(s) pertaining to a particular category of standards.

### **Table of Contents**

The Table of Contents lists the tabbed categories of standards plus the title and identifier number for each standard within each tabbed section.

### **Numbering System**

Each standard has a unique six-digit identifier number. The number is divided into three sets of two-digit couplets, each set being divided by a dash.

Example: 03-04-05...

03 indicates standard document #3 (i.e., The Electronic Engineering Standards document).

04 indicates section #4 in the document (i.e., The Program Evaluation and Planning standards section).

05 indicates standard #5 within section four (i.e., The Student Performance standard within the Program Evaluation and Planning standards section).

### **Finding a Standard**

Standard identifier numbers appear in the upper right-hand corner of each page. To find a given standard, refer to the Table of Contents to find the identifier number of the standard of interest, select the appropriate section tab, and find the desired standard within the selected tab section.

### **Amendments**

Registered manual holders are instructed to keep their manuals updated as amendments are disseminated.

### **Document Transmittal**

All new or revised documents are sent to the registered holder of the manual and are recorded on a Manuals Document Transmittal Form. Transmittals are numbered consecutively, and instructions for use are printed on the form.

### **Amendment Record**

The registered holder of the manual records the receipt of all Manual Document Transmittals on the Amendment Record. This record and instructions are found on the reverse side of the manual title page.

## **CIVIL ENGINEERING TECHNOLOGY**

### **FOUNDATIONS (Philosophy)**

#### **Standard Statement**

A philosophy statement is developed expressing the beliefs and values that govern the content and conduct of the Civil Engineering Technology program.

#### **Explanatory Comment**

A statewide program philosophy statement is developed and provided for the Civil Engineering Technology program. The statewide philosophy statement may be augmented at the local level so that the unique circumstances of the community may be accommodated.

The Civil Engineering Technology program philosophy statement expresses the fundamental educational and occupational principles that guide the instructional process.

#### **Evaluative Criteria**

The Civil Engineering Technology program has a clearly defined, written philosophy statement that is reviewed by the program faculty, the administration, and the program industrial advisory committee.

Any addition to the Civil Engineering Technology program philosophy statement is developed by the program faculty, the administration, and the program industrial advisory committee.

The written philosophy of the Civil Engineering Technology program is in accordance with Accreditation Board of Engineering and Technology (ABET) accreditation criteria and curricular guidelines.

The philosophy of the Civil Engineering Technology program is in accordance with the philosophy of the Georgia Board of Technical and Adult Education and reflects the beliefs, values, and attitudes of the institution, the instructional field, the community, and the employment market.

### **CIVIL ENGINEERING TECHNOLOGY**

The philosophy of the Civil Engineering Technology program determines the unique role of the program in meeting the technical educational needs of the students, the community, and the employment market.

The philosophy of the Civil Engineering Technology program reflects a desire to achieve educational excellence.

The philosophy of the Civil Engineering Technology program reflects a commitment to meet the needs of business and industry.

The philosophy of the Civil Engineering Technology program includes a nondiscrimination statement pertaining to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, and economic disadvantage.

The philosophy statement of the Civil Engineering Technology program is approved by the administration of the institution.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PHILOSOPHY**

The basic beliefs, attitudes, and concepts that are the foundation of the Civil Engineering Technology program are expressed in the following statements.

Civil Engineering Technology is a program of study which is consistent with the philosophy and purpose of the institution. The program provides academic foundations in communications, mathematics, science, and behavioral/social science as well as technical fundamentals appropriate for a two year program at the associate degree level. Program graduates are well grounded in the underlying fundamentals of a civil engineering technology and are well prepared for employment and subsequent upward mobility.

The civil engineering technician performs those functions between a tradesman and an engineer. Technicians may work alone, or as members of a team. Important attributes for success of program graduates are critical thinking, problem solving, and the ability to apply technology to the work requirement.

The program structure acknowledges individual differences and provides opportunities for persons to seek fulfillment of their educational goals. The program does not discriminate on the basis of race, color, national origin, religion, sex, handicapping condition, academic disadvantage, or economic disadvantage.

To assist each student to attain his or her potential within the program, both the instructor and the student incur an obligation in the learning process. The instructor is a manager of instructional resources and organizes instruction in a manner which promotes learning. The student assumes responsibility for learning by actively participating in the learning process.

This is a dynamic field which requires extraordinary attention to current curriculum and up-to-date instructional equipment. The program promotes the concept of change as the technology evolves. The need for nurturing the spirit of involvement and lifelong learning is paramount.

## CIVIL ENGINEERING TECHNOLOGY

### FOUNDATIONS (Purpose)

#### Standard Statement

A purpose statement delineating the instructional services which the Civil Engineering Technology program provides is developed and implemented.

#### Explanatory Comment

A statewide purpose statement is developed and provided for the Civil Engineering Technology program. The statewide purpose statement may be augmented at the local level so that the unique circumstances of the community may be accommodated.

A major purpose of the Civil Engineering Technology program is to meet community and employment market needs for education in civil engineering technology.

#### Evaluative Criteria

The Civil Engineering Technology program has a clearly defined, written purpose statement that is reviewed by the program faculty, the administration, and the program industrial advisory committee.

Any addition to the Civil Engineering Technology program purpose statement is developed by the program faculty, the administration, and the program industrial advisory committee.

The purpose of the Civil Engineering Technology program is in accordance with the purpose of the Georgia Board of Technical and Adult Education and the institution.

The purpose of the Civil Engineering Technology program is in accordance with ABET accreditation criteria and curricular guidelines.

The purpose of the Civil Engineering Technology program reflects the values and beliefs expressed in the program philosophy.

The purpose of the Civil Engineering Technology program includes a nondiscrimination statement pertaining to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, and economic disadvantage.

Standard Number:  
59-01-02

**CIVIL ENGINEERING TECHNOLOGY**

The purpose statement of the Civil Engineering Technology program is approved by the administration of the institution.

## CIVIL ENGINEERING TECHNOLOGY

### PURPOSE

The purpose of the Civil Engineering Technology program is to provide educational opportunities to individuals that will enable them to obtain the knowledge, skills, and attitudes necessary to succeed in the field of civil engineering as engineering technicians.

The program provides educational opportunities regardless of race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

The Civil Engineering Technology program is intended to provide an ABET accredited, associate degree level program of study, which prepares graduates as civil engineering technicians.



## **CIVIL ENGINEERING TECHNOLOGY**

### **FOUNDATIONS (Goals)**

#### **Standard Statement**

A program goals statement focuses the efforts of the Civil Engineering Technology program.

#### **Explanatory Comment**

A statewide goals statement is developed and provided for the Civil Engineering Technology program. The statewide program goals statement may be augmented at the local level so that the unique circumstances of the community may be accommodated.

Goals are broad statements of intent that delineate the achievements the Civil Engineering Technology program seeks to attain. Goals are stated in non-quantifiable terms.

#### **Evaluative Criteria**

The Civil Engineering Technology program has a clearly defined, written goals statement that is reviewed by the program faculty, the administration, and the program industrial advisory committee.

Any addition to the Civil Engineering Technology program goals statement is developed by the program faculty, the administration, and the program industrial advisory committee.

The goals of the Civil Engineering Technology program are in accordance with ABET accreditation criteria and curricular guidelines.

The goals of the Civil Engineering Technology program are in accordance with the philosophy and purpose of the program.

The goals of the Civil Engineering Technology program reflect a desire to provide exemplary technical education.

The goals of the Civil Engineering Technology program are the basis for the development of program objectives.

**CIVIL ENGINEERING TECHNOLOGY**

The goals of the Civil Engineering Technology program include a nondiscrimination statement pertaining to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, and economic disadvantage.

The goals statement of the Civil Engineering Technology program is approved by the administration of the institution.

## **CIVIL ENGINEERING TECHNOLOGY**

### **GOALS (Process)**

The goals of the Civil Engineering Technology program are to:

1. Provide education which acknowledges individual differences and respects the right of individuals to seek fulfillment of educational needs.
2. Provide an environment which encourages the individual to benefit and contribute as a partner in the economic progress, development, and stability of Georgia.
3. Provide education which develops the potential of each student to become a productive, responsible, and upwardly mobile member of society.
4. Provide quality civil engineering technology education in an atmosphere that fosters interest in and enthusiasm for learning.
5. Prepare graduates to function as accountable and responsible members within their field of endeavor.
6. Prepare graduates to function as safe and competent practitioners in the civil engineering technology field.
7. Prepare program graduates with the highest level of competence possible given the constraints of the interests and ability levels of the individual.
8. Provide educational and related services without regard to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.
9. Foster employer participation, understanding, and confidence in the instructional process and the competence of Civil Engineering Technology program graduates.

## CIVIL ENGINEERING TECHNOLOGY

### FOUNDATIONS (Program Objectives)

#### Standard Statement

An objectives statement based on established program goals is developed for the Civil Engineering Technology program.

#### Explanatory Comment

A statewide objectives statement is developed and provided for the Civil Engineering Technology program. The statewide program objectives statement may be augmented at the local level so that the unique circumstances of the community may be accommodated.

Program objectives are desired program outcomes stated in measurable, temporal, and operational terms.

#### Evaluative Criteria

The Civil Engineering Technology program has a clearly defined, written objectives statement that is reviewed by the program faculty, the administration, and the program industrial advisory committee.

Any addition to the Civil Engineering Technology program objectives statement is developed by the program faculty, administration, and the program industrial advisory committee.

The essential objectives of the Civil Engineering Technology program are in accordance with ABET accreditation criteria and curricular guidelines.

The objectives of the Civil Engineering Technology program stress learning outcomes, efficiency, enrollment, public relations, and other outcomes that impact on program quality.

A major objective of the Civil Engineering Technology program is student achievement of identified exit point competencies documented by an associate degree.

**CIVIL ENGINEERING TECHNOLOGY**

The objectives of the Civil Engineering Technology program include a nondiscrimination statement pertaining to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, and economic disadvantage.

The objectives statement of the Civil Engineering Technology program is approved by the administration of the institution.

## **CIVIL ENGINEERING TECHNOLOGY**

### **OBJECTIVES (Process)**

The objectives of the Civil Engineering Technology program are to:

1. Provide current curriculum, instructional materials, and equipment (in accordance with available funding) which teach knowledge, skills, and attitudes appropriate to industry needs.
2. Provide educational facilities which foster learning and provide safe, healthy environments available and accessible to all students who can benefit from the program.
3. Provide academic instruction which supports effective learning within the program and which enhances professional performance on the job.
4. Provide employability skills which foster work attitudes and work habits that will enable graduates of the program to perform as competent employees.
5. Nurture the desire for learning so that graduates will pursue their own continuing education as a lifelong endeavor.
6. Provide an educational atmosphere which promotes a positive self-image and a sense of personal worth.
7. Provide education that fosters development of good safety habits.
8. Provide admission, educational, and placement services without regard to race, color, national origin, religion, sex, age, or handicapping condition.
9. Provide information to the public regarding the program that will facilitate recruitment and enrollment of students.
10. Promote good public relations via contacts and regular communications with business, industry, and the public sector.
11. Promote faculty and student rapport and communications to enhance student success in the program.

## CIVIL ENGINEERING TECHNOLOGY

### FOUNDATIONS (Availability)

#### Standard Statement

Written philosophy, purpose, goals, and objectives statements for the Civil Engineering Technology program are made available to the staff of the institution and the general public.

#### Explanatory Comment

Published Civil Engineering Technology program philosophy and purpose statements are important recruitment tools that help students to select programs that meet their needs.

#### Evaluative Criteria

The philosophy and purpose statements of the Civil Engineering Technology program are published and made available to the staff of the institution and the general public.

Written goals and objectives are available for the Civil Engineering Technology program.

Civil Engineering Technology program philosophy, purpose, goals, and objectives statements are used by student personnel services to aid in recruiting and placing students.

## **CIVIL ENGINEERING TECHNOLOGY**

### **FOUNDATIONS (Evaluation)**

#### **Standard Statement**

The philosophy, purpose, goals, and objectives of the Civil Engineering Technology program are evaluated.

#### **Explanatory Comment**

The evaluation of the Civil Engineering Technology program philosophy, purpose, goals, and objectives assists the program in meeting student, community, and employment market needs.

#### **Evaluative Criteria**

Formal evaluation of the philosophy, purpose, goals, and objectives of the Civil Engineering Technology program is performed annually and documents input from the program faculty, the administration, and the program industrial advisory committee.

Evaluation of the philosophy, purpose, goals, and objectives of the Civil Engineering Technology program is conducted to assure congruence with changing community and employment market needs and Georgia Board of Technical and Adult Education philosophy and purpose statements.

Evaluation of the philosophy, purpose, goals, and objectives of the Civil Engineering Technology program assesses congruence with ABET accreditation criteria and curricular guidelines and requirements of any designated accrediting agency(ies).

Evaluation processes are designed to consider state evaluation processes and requirements and to verify that the philosophy, purpose, goals, and objectives of the Civil Engineering Technology program are being fulfilled.

Evaluation of the philosophy, purpose, goals, and objectives of the Civil Engineering Technology program results in revision, as needed.



## CIVIL ENGINEERING TECHNOLOGY

### ADMISSIONS (Admission Requirements)

#### Standard Statement

Statewide admission requirements are implemented for the Civil Engineering Technology program.

#### Explanatory Comment

Admission refers to regular admission to an associate degree granting program.

Statewide program admission requirements consider state and national occupational licensing and certifying requirements, where applicable.

The institution develops and implements clearly stated associate degree program admissions policies and procedures.

#### Evaluative Criteria

The requirements for admission to the Civil Engineering Technology program are:

- a) achievement of SAT scores of no less than math 400 and verbal 380 or equivalent scores on a statistically validated test;
- b) documentation of high school graduation or satisfaction of High School Equivalency Certificate requirements;
- c) demonstration of competencies equivalent to completion of high school, college preparatory algebra and physics; and
- d) proper completion of application and related procedures.

Admission of transfer students to the Civil Engineering Technology program is contingent upon their meeting the following requirements:

- a) regular admission and good standing at a regionally accredited degree granting institution; and
- b) proper completion of application and related procedures.

## **CIVIL ENGINEERING TECHNOLOGY**

### **ADMISSIONS (Provisional Admission Requirements)**

#### **Standard Statement**

Statewide provisional admission requirements are implemented for the Civil Engineering Technology program.

#### **Explanatory Comment**

Provisional admission is granted to qualified students who do not meet the regular admission requirements of the program.

Provisionally admitted students are allowed to take developmental studies courses, pre-tech courses, and/or certain occupational courses required for program completion as designated in the course sequence standard. Developmental studies and pre-tech courses provide instruction in disciplines such as English, reading, math, and physics.

The institution develops and implements clearly stated policies and procedures for entry into associate degree programs on a provisional basis.

#### **Evaluative Criteria**

Provisional admission to the Civil Engineering Technology program is afforded those students who do not meet program admission requirements but who meet provisional admission requirements.

The requirements for provisional admission to the Civil Engineering Technology program are either:

- a) documentation of high school graduation, satisfaction of High School Equivalency Certificate requirements, or approval based on evaluation by admissions officers and program faculty; and
- b) proper completion of application and related procedures.

All Civil Engineering Technology program students initially admitted on a provisional basis meet regular admission requirements prior to graduation.

**CIVIL ENGINEERING TECHNOLOGY**

Provisionally admitted students whose math and/or verbal achievement levels do not meet regular program admission requirements are required to enroll in developmental and/or pre-tech courses approved by the Georgia Board of Technical and Adult Education.

## **CIVIL ENGINEERING TECHNOLOGY**

### **ADMISSIONS (Recruitment)**

#### **Standard Statement**

The Civil Engineering Technology program recruitment materials and practices are in the best interests of the students, institution, community, and employment market.

#### **Explanatory Comment**

The recruitment effort makes potential students aware of the services provided by the Civil Engineering Technology program and the institution.

The recruitment effort seeks to serve the economic development of the community by affording opportunities to prospective students.

The institution develops and implements a systematic, overall recruitment effort designed to assist students in meeting their occupational needs.

#### **Evaluative Criteria**

The recruitment effort assists in maintaining and/or increasing the Civil Engineering Technology program and institution enrollments.

The recruitment effort of the Civil Engineering Technology program includes participation in or assistance with:

- a) development and dissemination of informational materials;
- b) recruitment activities with other programs within the institution;
- c) communication with potential students through contact with employers, secondary schools, organizations, the program advisory committee, and others;
- d) promotion of Civil Engineering Technology program awareness among individuals and groups; and
- e) consideration of the industrial and business needs of the community and employment market.

All recruitment materials and practices are ethical, equitable, and accurate in the depiction of the institution, the Civil Engineering Technology program, and the potential benefits of program completion.

**CIVIL ENGINEERING TECHNOLOGY**

A written description of the admission requirements and procedures, tuition fees, and other costs of the Civil Engineering Technology program is made available to potential students.

The Civil Engineering Technology program recruitment effort is in compliance with ABET accreditation criteria.

## **CIVIL ENGINEERING TECHNOLOGY**

### **ADMISSIONS (Evaluation and Planning)**

#### **Standard Statement**

An evaluation of the admission requirements of the Civil Engineering Technology program is conducted.

#### **Explanatory Comment**

The admission requirements of the Civil Engineering Technology program are compatible with the admissions policies and procedures of the institution.

#### **Evaluative Criteria**

Civil Engineering Technology program admission requirements are evaluated annually to assure compliance with Georgia Board of Technical and Adult Education policies and standards and ABET accreditation criteria.

The administration, with input from the program faculty and industrial advisory committee, conducts an annual evaluation of Civil Engineering Technology program admission requirements to assess their adequacy in meeting the needs of the students, community, and employment market.

The evaluation results are used to modify the admissions procedures of the institution and to suggest Civil Engineering Technology program admission changes to the Georgia Board of Technical and Adult Education, as needed.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM STRUCTURE (Curriculum Design)**

#### **Standard Statement**

The curriculum of the Civil Engineering Technology program includes four categories of instruction: general core courses, fundamental technical courses, specific technical courses, and elective courses.

#### **Explanatory Comment**

General core courses and fundamental technical courses provide the academic and technical background that supports the specific technical and elective courses.

#### **Evaluative Criteria**

The Civil Engineering Technology program requires student completion of general core courses such as math, language skills, and other courses required by the Georgia Board of Technical and Adult Education and by ABET accreditation criteria.

The Civil Engineering Technology program requires student completion of fundamental technical courses in introductory concepts, principles, and technologies that provide the foundations for the given occupation and related fields.

The Civil Engineering Technology program requires student completion of specific technical courses that build on the foundations provided in the fundamental technical courses.

Civil Engineering Technology program students are offered the opportunity to take state-approved elective courses in order to develop their individual interests.

Elective technical courses meet regional and national accreditation and certification requirements.

**CIVIL ENGINEERING TECHNOLOGY**

**PROGRAM STRUCTURE  
(Program Numbering System)**

**Standard Statement**

A Classification of Instructional Programs (CIP) code is applied to the Civil Engineering Technology program.

**Explanatory Comment**

Assignment of a statewide CIP code to every diploma/degree program is the basis for consistent program identification.

**Evaluative Criteria**

The Civil Engineering Technology program is assigned a (PGM) CIP code of (PGM) 15.0201 and is consistent with all other programs throughout the state which have the same CIP code.



## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM STRUCTURE (Program Consistency)**

#### **Standard Statement**

The Civil Engineering Technology program utilizes essential course components consistent with statewide program requirements.

#### **Explanatory Comment**

Programs assigned an identical (PGM) CIP code are consistent statewide.

#### **Evaluative Criteria**

The Civil Engineering Technology ABET accredited program is assigned a (PGM) CIP code of (PGM) 15.0201 and utilizes essential components designated for that program number statewide. Program components include, but are not limited to:

a) **Program Title**

Civil Engineering Technology

b) **Program Description**

The Civil Engineering Technology program is a planned sequence of carefully developed college-level courses designed to prepare students to work in the field of civil engineering technology. Graduates will receive an associate degree with a major in Civil Engineering Technology. The program of study emphasizes the application of scientific, mathematic, and engineering knowledge and methods combined with technical skills in support of civil engineering activities.

## CIVIL ENGINEERING TECHNOLOGY

c) <u>Essential Courses</u>			<u>Credits</u>
1) <u>Essential General Core Courses</u>			<u>45</u>
ENG	191	Composition	5
ENG	192	Technical Communications	5
MAT	191	College Algebra	5
MAT	193	College Trigonometry	5
MAT	195	Calculus and Analytic Geometry	5
PHY	191	Physics I	5
PHY	192	Physics II	5
PHY	291	Physics III	5
PSY	191	Introductory Psychology	
<u>OR</u>			
ECO	191	Principles of Economics	5
2) <u>Essential Fundamental Technical Courses</u>			<u>22</u>
CET	110	Civil Engineering Drafting I	4
CET	120	Civil Engineering Drafting II	4
CET	140	Descriptive Geometry	4
CIS	191	Computer Programming	
		Fundamentals	5
EEF	190	Engineering Technology Professions	1
MET	204	CAD I	4
3) <u>Essential Specific Technical Courses</u>			<u>45</u>
CET	131	Statics and Dynamics	5
CET	212	Construction Cost Estimating	5
CET	220	Structural Steel Design/Drafting	5
CET	222	Basic Land Surveying	5
CET	231	Reinforced Concrete Design	5
CET	232	Senior Design Project	5
MET	208	Strength of Materials	5
XXX	xxx	Technical Electives	10

**CIVIL ENGINEERING TECHNOLOGY**

4) Elective Courses 6

XXX	xxx	Elective	3
XXX	xxx	Elective	3

d) Program Final Exit Point

Civil engineering technician, certified by an associate degree

e) Credits Required for Graduation

118 minimum quarter hour credits required for graduation

## CIVIL ENGINEERING TECHNOLOGY

### PROGRAM STRUCTURE (Exit Points)

#### Standard Statement

The Civil Engineering Technology program faculty documents student attainment of the identified exit point.

#### Explanatory Comment

An exit point is the point at which occupational competencies are achieved to qualify students for an entry level position in their field.

#### Evaluative Criteria

The faculty of the Civil Engineering Technology program monitors, evaluates, and records student progress towards achieving the exit point competency level.

The final Civil Engineering Technology program exit point, documented by an associate degree, is civil engineering technician.

The institution documents completion of the Civil Engineering Technology exit point with a transcript.

Graduation from the Civil Engineering Technology program is dependent upon meeting the requirements of the Georgia Board of Technical and Adult Education.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM STRUCTURE (Credentials)**

#### **Standard Statement**

The achievement of Civil Engineering Technology program graduates and leavers is documented by the institution.

#### **Explanatory Comment**

A program graduate is a student who successfully fulfills all program requirements. A program leaver is a student who exits from the program prior to completion of all program requirements.

Course description documents are based on the course title, the essential course description, the essential competency areas taught, and the number of credits awarded as detailed in the program-specific standards and the listing of state-approved electives.

#### **Evaluative Criteria**

The institution grants each Civil Engineering Technology program graduate an associate degree certifying satisfaction of program requirements.

Upon request, each Civil Engineering Technology program graduate is provided a transcript and course description document detailing courses taken, grades, credits earned, and credential awarded.

Upon request, each Civil Engineering Technology program leaver who has completed one or more courses is provided a transcript and course description document detailing courses taken, grades, and credits earned.

Upon request, each Civil Engineering Technology program leaver who has not completed an entire course is provided a transcript and course description document detailing the course entered and withdrawal.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM STRUCTURE (Course Code)**

#### **Standard Statement**

A statewide course identification code is applied to each Civil Engineering Technology course.

#### **Explanatory Comment**

An alphanumeric identification code is assigned to each course.

All Georgia Board of Technical and Adult Education approved courses are included in the course identification coding system.

#### **Evaluative Criteria**

Each course is assigned an alphanumeric descriptor that serves as the statewide course identification code.

The following list contains the Georgia Board of Technical and Adult Education designated course titles and course identification codes of the Civil Engineering Technology program.

CET 110	Civil Engineering Drafting I
CET 120	Civil Engineering Drafting II
CET 131	Statics and Dynamics
CET 140	Descriptive Geometry
CET 212	Construction Cost Estimating
CET 220	Structural Steel Design/Drafting
CET 222	Basic Land Surveying
CET 231	Reinforced Concrete Design
CET 232	Senior Design Project
CIS 191	Computer Programming Fundamentals
ECO 191	Principles of Economics
EEF 190	Engineering Technology Professions
ENG 191	Composition
ENG 192	Technical Communications

**CIVIL ENGINEERING TECHNOLOGY**

MAT 191 College Algebra  
MAT 193 College Trigonometry  
MAT 195 Calculus and Analytic Geometry  
MET 204 CAD I  
MET 208 Strength of Materials  
PHY 191 Physics I  
PHY 192 Physics II  
PHY 291 Physics III  
PSY 191 Introductory Psychology

## CIVIL ENGINEERING TECHNOLOGY

### PROGRAM STRUCTURE (Course Consistency)

#### Standard Statement

Courses assigned a given course identification code are consistent.

#### Explanatory Comment

Courses assigned the same course identification code are consistent throughout the state.

One quarter equals a minimum of 50 instructional days. One contact hour equals a minimum of 50 minutes of instruction.

One (1) quarter hour credit is defined as follows:

- a) class - One contact hour of class per week for the duration of a quarter equals one quarter hour credit; class is defined as instruction which emphasizes group or individualized classroom learning.
- b) demonstration laboratory (D.Lab) - Two contact hours of demonstration laboratory per week for the duration of a quarter equals one quarter hour credit; demonstration laboratory is defined as instruction which emphasizes teacher assisted learning activities.
- c) practical performance laboratory (P.Lab) - Three contact hours of practical performance laboratory per week for the duration of a quarter equals one quarter hour credit; practical performance laboratory is defined as instruction which emphasizes structured activities requiring the application and practice of occupational competencies.
- d) occupation-based instruction (O.B.I.) - Three contact hours of occupation-based instruction per week for the duration of a quarter equals one quarter hour credit; occupation-based instruction is defined as instruction which emphasizes supervised work-experience activities requiring the application of occupational competencies.



**CIVIL ENGINEERING TECHNOLOGY**

**Evaluative Criteria**

Each course assigned a given course identification code utilizes certain components identical to those designated for that course identification code statewide.

Components designated for each course identification code include:

- a) course title;
- b) essential course description;
- c) essential competency areas taught; and
- d) number of quarter hour credits awarded for course completion.

## **CIVIL ENGINEERING TECHNOLOGY**

Courses in the Civil Engineering Technology program include:

### **CET 110 - CIVIL ENGINEERING DRAFTING I**

Introduces engineering drawing. Topics include: introduction to drafting; drafting fundamentals such as use of instruments, linework, lettering, layout, and geometric construction; orthographic projection; dimensioning; sectional views; technical sketching; pictorial drawing; and schematic drawing.

#### **Competency Areas**

- Introduction to Drafting
- Drafting Fundamentals
- Orthographic Projection
- Dimensioning
- Sectional Views
- Technical Sketching
- Pictorial Drawing
- Schematic Drawing

#### **Hours**

Class/Week - 2  
P.Lab/Week - 6  
Credit - 4

Prerequisite: Program admission

### **CET 120 - CIVIL ENGINEERING DRAFTING II**

Continues to develop skill in engineering drafting. Topics include: technical sketching, projection dimensioning, advanced orthographic projection, advanced pictorial techniques, and industrial graphics application.

#### **Competency Areas**

- Technical Sketching
- Projection Dimensioning
- Advanced Orthographic Projection
- Advanced Pictorial Techniques
- Industrial Graphics Application

#### **Hours**

Class/Week - 2  
P.Lab/Week - 6  
Credit - 4

Prerequisite: CET 110

## CIVIL ENGINEERING TECHNOLOGY

### CET 131 - STATICS AND DYNAMICS

Emphasizes the study of forces and their effects on bodies at rest and in motion. Topics include: Newton's laws, scalars and vectors, concurrent forces and nonconcurrent forces, analysis of structures, inertia and friction, and kinematics and kinetics of particles and rigid bodies.

#### Competency Areas

- Newton's Laws
- Scalars and Vectors
- Concurrent Forces and Nonconcurrent Forces
- Analysis of Structures
- Inertia and Friction
- Kinematics and Kinetics of Particles  
and Rigid Bodies

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisites: MAT 193, PHY 191

### CET 140 - DESCRIPTIVE GEOMETRY

Provides multiview and dimensioning and techniques necessary to develop views that completely describe geometric shapes. Topics include: relations of points, lines, planes, and surfaces; auxiliary views; projection principles; development of surfaces; and intersection of surfaces.

#### Competency Areas

- Relations of Points, Lines,  
Planes, and Surfaces
- Auxiliary Views
- Projection Principles
- Development of Surfaces
- Intersection of Surfaces

#### Hours

Class/Week - 2  
P.Lab/Week - 6  
Credit - 4

Prerequisite/Corequisite: CET 120

## CIVIL ENGINEERING TECHNOLOGY

### CET 212 - CONSTRUCTION COST ESTIMATING

Introduces construction project drawings and plans, specifications, construction methods, and building codes; and methods and practices used in estimating building costs based on a complete set of plans and specifications. Topics include: plans, such as floor plans, elevations, wall sections, electrical plans, heating and cooling plans, and site plans; and unit cost concepts, including material take-offs and pricing adjustments for materials and labor based on geographic area and annual cost indices.

#### Competency Areas

- Plans
- Unit Cost Concepts

#### Hours

Class/Week - 2  
D.Lab/Week - 6  
Credit - 5

Prerequisite: MAT 191

### CET 220 - STRUCTURAL STEEL DESIGN/DRAFTING

Presents steel design concepts and practices based on the *AISC Manual of steel construction*. Emphasis is placed on steel shapes; bending theory used in design of beams; design of roof trusses, columns, and floor framing; design of beams by elastic theory and by plastic theory; and design of bolted and welded connections. Topics include: steel stress analysis, beam and truss design, column and floor framing design, connections, and truss design drawings. Truss design and drawings are to be done by computer aided drafting and design (CADDs).

#### Competency Areas

- Steel Stress Analysis
- Beam and Truss Design
- Column and Floor Framing Design
- Connections
- Truss Design Drawings

#### Hours

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

Prerequisites/Corequisites: CET 131, MAT 193

## **CIVIL ENGINEERING TECHNOLOGY**

### **CET 222 - BASIC LAND SURVEYING**

Develops skill in the use of tapes, chain pins, levels, transits, theodolites, and EDM instruments to measure distances, angles, and elevations. Students will perform differential leveling and boundary surveys and prepare field notes. Topics include: survey instrument use, differential leveling, boundary surveys, field data records, and field data interpretation.

#### **Competency Areas**

- Survey Instrument Use
- Differential Leveling
- Boundary Surveys
- Field Data Records
- Field Data Interpretation

#### **Hours**

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

**Prerequisite:** MAT 193

### **CET 231 - REINFORCED CONCRETE DESIGN**

Presents reinforced concrete design concepts and the principles of design for concrete beams, slabs, columns, footings, and framing. Topics include: reinforced concrete stress analysis, beam design, column and footings design, and connections.

#### **Competency Areas**

- Reinforced Concrete Stress Analysis
- Beam Design
- Column and Footings Design
- Connections

#### **Hours**

Class/Week - 5  
Lab/Week - 0  
Credit - 5

**Prerequisite/Corequisite:** MET 208

**CIVIL ENGINEERING TECHNOLOGY**

**CET 232 - SENIOR DESIGN PROJECT**

Develops skills in designing and preparing civil engineering drawings using structural steel and reinforced concrete. Design and drawings for an industrial or commercial building or for a civil structure on a construction project are to be done using computer aided drafting and design (CADDs). Topics include: applications of computer aided drafting and design (CADDs), structural design and drafting, and drawing and design presentation.

**Competency Areas**

- Applications of Computer Aided Drafting and Design (CADDs)
- Structural Design and Drafting
- Drawing and Design Presentation

**Hours**

Class/Week - 3  
P.Lab/Week - 7  
Credit - 5

**Prerequisites:** CET 220, MET 204

**CIVIL ENGINEERING TECHNOLOGY**

**CIS 191 - COMPUTER PROGRAMMING FUNDAMENTALS**

Emphasizes fundamental concepts of problem solving using computers. Students explore flow charts, control structures, subroutines, arrays, strings manipulation, matrices, and files. A high level source language is used. The laboratory portion of the course is designed to acquaint students with computer facilities and software utilities. Topics include: system fundamentals, concepts of structured programming, arrays, functions and subroutines, data files, engineering applications, graphics, matrices, and program editing. Laboratory work parallels class work.

**Competency Areas**

**Hours**

- System Fundamentals
- Concepts of Structured Programming  
  (High Level Source Language)
- Arrays
- Functions and Subroutines
- Data Files
- Engineering Applications
- Graphics
- Matrices
- Program Editing

Class/Week- 3  
P.Lab/Week - 6  
Credit - 5

**Prerequisite:** Program admission

## CIVIL ENGINEERING TECHNOLOGY

### ECO 191 - PRINCIPLES OF ECONOMICS

Investigates economic principles and applications of economic principles to current trends. Emphasis is placed on principles of the American economic system of free enterprise. Topics include: basic economic principles; economic forces and indicators; capital and labor; business enterprise; factors of industrial production cost; price, competition, and monopoly; personal income management; insurance, personal investments, and social security; money and banking; government expenditures, federal and local; fluctuations in production, employment, and income; and the United States economy in perspective.

#### Competency Areas

#### Hours

- Basic Economic Principles
- Economic Forces and Indicators
- Capital and Labor
- Business Enterprise
- Factors of Industrial Production Cost
- Price, Competition, and Monopoly
- Personal Income Management
- Insurance, Personal Investments, and Social Security
- Money and Banking
- Government Expenditures, Federal and Local
- Fluctuations in Production, Employment, and Income
- United States Economy in Perspective

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: Program admission



## CIVIL ENGINEERING TECHNOLOGY

### EEF 190 - ENGINEERING TECHNOLOGY PROFESSIONS

Familiarizes students with careers in engineering technology. Representatives of local industry provide an orientation to types of work and employers' expectations in engineering technology. Students will be involved in job site visits and activities utilizing the library and other resources to explore the world of engineering technology. Topics include: careers in engineering technology, career requirements, and work ethics.

#### Competency Areas

- Careers in Engineering Technology
- Career Requirements
- Work Ethics

#### Hours

Class/Week - 0  
P.Lab/Week - 3  
Credit - 1

Prerequisite: Provisional admission

### ENG 191 - COMPOSITION

Emphasizes the development and improvement of written and oral communications abilities. Topics include: idea development; vocabulary; spelling; outlining; sentence elements; revision; unity and coherence in basic paragraph development; research; exploration of communication modes including description, exposition, argumentation, and persuasion; and functional writing as applied to reports, abstracts, and technical papers.

#### Competency Areas

- Fundamentals of Grammar and Composition
- Fundamentals of Oral Communications
- Modes of Written and Oral Communications
- Research

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: Program admission level verbal achievement

## CIVIL ENGINEERING TECHNOLOGY

### ENG 192 - TECHNICAL COMMUNICATIONS

Emphasizes practical knowledge of technical communications techniques, procedures, and reporting formats used in industry and business. Topics include: accepted methods of describing devices and processes by oral and written means; and the proper use of standards manuals, guides, specifications, and interpretations of data in the report format.

#### Competency Areas

- Reference Use and Research
- Device Description
- Process Description
- Formal Technical Report Writing
- Oral Technical Report Presentation

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: ENG 191

### MAT 191 - COLLEGE ALGEBRA

Emphasizes problem solving techniques. Topics include: fundamental algebra concepts and operations, linear and quadratic equations and functions, simultaneous equations, inequalities, exponents and powers, graphing techniques, and word problems.

#### Competency Areas

- Fundamental Concepts and Operations
- Linear and Quadratic Equations and Functions
- Simultaneous Equations
- Inequalities
- Exponents and Powers
- Graphing Techniques
- Word Problems

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: Program admission level math achievement

## CIVIL ENGINEERING TECHNOLOGY

### MAT 193 - COLLEGE TRIGONOMETRY

Emphasizes problem solving techniques. Topics include: trigonometric functions, properties of trigonometric functions, vectors and triangles, exponential functions, complex numbers, identities, inverse functions, and logarithmic functions. Graphs of functions and their inverse are included.

#### Competency Areas

- Trigonometric Functions
- Properties of Trigonometric Functions
- Exponential Functions
- Vectors and Triangles
- Inverse of Trigonometric Functions/Graphing
- Logarithmic Functions

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: MAT 191

### MAT 195 - CALCULUS AND ANALYTIC GEOMETRY

Emphasizes the use of calculus with an introduction to analytic geometry. Topics include: differentiation and an introduction to integration techniques for algebraic and transcendental functions. Applications of techniques include extreme-value problems and motion, area, and other topics as time allows.

#### Competency Areas

- Elements of Analytic Geometry
- Derivatives and Applications
- Integration and Applications
- Differentiation of Transcendental Functions
- Integration Techniques
- Limits

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: MAT 193

## **CIVIL ENGINEERING TECHNOLOGY**

### **MET 204 - CAD I**

Emphasizes the use of interactive computing techniques in engineering drafting and design. Topics include: use of system hardware and software, concepts of basic dimensional computer aided drafting (CAD), and engineering applications. Laboratory work parallels class work.

#### **Competency Areas**

- CAD System Hardware
- CAD System Software
- Dimensional CAD Concepts
- CAD Engineering Design Applications

#### **Hours**

Class/Week - 2  
P.Lab/Week - 6  
Credit - 4

Prerequisite: CET 110

Prerequisite/Corequisite: MAT 193

### **MET 208 - STRENGTH OF MATERIALS**

Provides an overview of the behavior of materials when subjected to different loadings and restraints, and the prediction of materials behavior in different situations. Topics include: stress, strain, torsion, moments of inertia, column analysis, and beam bending. Laboratory work parallels class work.

#### **Competency Areas**

- Concepts of Stress
- Concepts of Strain
- Torsion
- Moments of Inertia
- Column Analysis
- Beam Bending

#### **Hours**

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

Prerequisites: CET 131, MAT 193

**CIVIL ENGINEERING TECHNOLOGY****PHY 191 - PHYSICS I**

Introduces the classical theories of mechanics. Topics include: measurements and systems of units; Newton's laws; work, energy, and power; impulse and momentum; linear motion and two-dimensional motion; equilibrium; and statics and dynamics of fluids. Laboratory exercises supplement class work. Computer use is an integral part of class and laboratory assignments.

**Competency Areas**

- Measurements and Systems of Units
- Newton's Laws
- Work, Energy, and Power
- Impulse and Momentum
- Linear Motion and Two-Dimensional Motion
- Equilibrium
- Statics and Dynamics of Fluids

**Hours**

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

**Prerequisites:** CIS 191, MAT 191

**PHY 192 - PHYSICS II**

Introduces theories of electricity and magnetism. Topics include: electrostatic forces and fields, magnetism, electromagnetic potential, circuit elements and theory, and electromagnetic waves. Laboratory exercises supplement class work. Computer use is an integral part of class and laboratory assignments.

**Competency Areas**

- Electrostatic Forces and Fields
- Magnetism
- Electromagnetic Potential
- Circuit Elements and Theory
- Electromagnetic Waves

**Hours**

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

**Prerequisites:** MAT 193, PHY 191

**CIVIL ENGINEERING TECHNOLOGY**

**PHY 291 - PHYSICS III**

Introduces classical theories of heat, sound, light, and modern physics. Topics include: gas laws; heat transfer; thermodynamics; simple harmonic motion; wave motion; sound; properties of light; and an introduction to relativity, atomic physics, and nuclear physics concepts. Laboratory exercises supplement class work. Computer use is an integral part of class and laboratory assignments.

**Competency Areas**

- Gas Laws
- Heat Transfer
- Thermodynamics
- Harmonic Motion
- Wave Motion
- Sound
- Light Properties
- Relativity Concepts
- Atomic Concepts
- Nuclear Concepts

**Hours**

Class/Week - 4  
P.Lab/Week - 3  
Credit - 5

**Prerequisites:** MAT 195, PHY 191

## CIVIL ENGINEERING TECHNOLOGY

### PSY 191 - INTRODUCTORY PSYCHOLOGY

Emphasizes the basics of human psychology and individual and group behavior. Topics include: social environments; career development; communications and group processes; personality; emotions and motives; conflicts, stress, and anxiety; perception and learning; and case problems and typical relationships.

#### Competency Areas

- Social Environments
- Career Development
- Communications and Group Processes
- Personality
- Emotions and Motives
- Conflicts, Stress, and Anxiety
- Perceptions and Learning

#### Hours

Class/Week - 5  
Lab/Week - 0  
Credit - 5

Prerequisite: Program admission

## CIVIL ENGINEERING TECHNOLOGY

### PROGRAM STRUCTURE (Course Sequence)

#### Standard Statement

The Civil Engineering Technology program requires students to progress through the four instructional course categories in a developmentally valid sequence.

#### Explanatory Comment

The four instructional course categories are: general core courses, fundamental occupational/technical courses, specific occupational/technical courses, and elective courses.

A developmentally valid instructional sequence is one in which the student acquires prerequisite knowledge and skills before progressing to more advanced studies.

#### Evaluative Criteria

The Civil Engineering Technology program requires students to complete prerequisite courses prior to enrolling in subsequent courses.

Provisions are made for Civil Engineering Technology program students to exempt courses in which they are competent.

The Civil Engineering Technology program complies with the required provisional admission, program admission, and/or program admission level competency prerequisites listed below.

The Civil Engineering Technology program reflects the suggested course prerequisites and/or corequisites listed below.

(In the list below prerequisites are indicated by [P]  
and prerequisites/corequisites are indicated by [P/C]).

#### Courses

#### Sequence

CET 110 Civil Engineering Drafting I

[P] Program admission



**CIVIL ENGINEERING TECHNOLOGY**

CET 120	Civil Engineering Drafting II	[P]	CET 110
CET 131	Statics and Dynamics	[P]	MAT 193, PHY 191
CET 140	Descriptive Geometry	[P/C]	CET 120
CET 212	Construction Cost Estimating	[P]	MAT 191
CET 220	Structural Steel Design/Drafting	[P/C]	CET 131, MAT 193
CET 222	Basic Land Surveying	[P]	MAT 193
CET 231	Reinforced Concrete Design	[P/C]	MET 208
CET 232	Senior Design Project	[P]	CET 220, MET 204
CIS 191	Computer Programming Fundamentals	[P]	Program admission
ECO 191	Principles of Economics	[P]	Program admission
EEF 190	Engineering Technology Professions	[P]	Provisional admission
ENG 191	Composition	[P]	Program admission level verbal achievement
ENG 192	Technical Communications	[P]	ENG 191
MAT 191	College Algebra	[P]	Program admission level math achievement
MAT 193	College Trigonometry	[P]	MAT 191
MAT 195	Calculus and Analytic Geometry	[P]	MAT 193
MET 204	CAD I	[P]	CET 110
MET 208	Strength of Materials	[P/C]	MAT 193
PHY 191	Physics I	[P]	CET 131, MAT 193
PHY 192	Physics II	[P]	CIS 191, MAT 191
PHY 291	Physics III	[P]	MAT 193, PHY 191
PSY 191	Introductory Psychology	[P]	MAT 195, PHY 191
		[P]	Program admission

## CIVIL ENGINEERING TECHNOLOGY

### PROGRAM STRUCTURE (Electives)

#### Standard Statement

Electives are made available for the Civil Engineering Technology program.

#### Explanatory Comment

Civil Engineering Technology program students are provided opportunities to enroll in state-approved elective courses. Elective courses utilize the following components: course title, essential course description, essential competency areas, and number of credits awarded for course completion.

Required courses for a degree program are available to other degree programs as elective courses.

#### Evaluative Criteria

Electives are established utilizing the following process:

- a) The administration of the institution, the program faculty, and the program advisory committee cooperate in establishing and utilizing a system to recommend needed and feasible elective courses;
- b) The administration of the institution, the program faculty, and the program advisory committee communicate with the statewide program technical committee and appropriate staff of the Georgia Department of Technical and Adult Education concerning the proposed elective(s);
- c) The administration of the institution, the program faculty, and the program advisory committee consider revisions and prepare a final elective course proposal;
- d) The administration of the institution presents the elective course proposal to the appropriate staff of the Georgia Department of Technical and Adult Education;
- e) The staff of the Georgia Department of Technical and Adult Education reviews the proposal using its established criteria for evaluating elective courses.

Electives are made available for the Civil Engineering Technology program and elective course work is included in the requirements for program graduation.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM STRUCTURE (Course Transferability)**

#### **Standard Statement**

Civil Engineering Technology program courses are transferable on the basis of their course identification code.

#### **Explanatory Comment**

Courses assigned identical course identification codes include consistent essential competency areas; therefore, resultant credits are guaranteed transferability between programs and institutions under the jurisdiction of the Georgia Board of Technical and Adult Education.

Courses that do not have an assigned course identification code but include similar essential competency areas are selectively transferable.

#### **Evaluative Criteria**

Civil Engineering Technology program courses assigned designated course identification codes are transferable between programs and institutions under the jurisdiction of the Georgia Board of Technical and Adult Education.

Courses taken outside the Georgia Technical and Adult Education system are selectively accepted for transfer on the basis of similarity in competency areas as determined by the Civil Engineering Technology program faculty and admissions officers.

Only those courses in which a grade of C or better was awarded are transferable.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM EVALUATION AND PLANNING (Program Evaluation)**

#### **Standard Statement**

A written evaluation procedure is developed and implemented for the Civil Engineering Technology program.

#### **Explanatory Comment**

Program evaluation procedures vary depending upon the nature of the institution and the program. The administration and program faculty, in association with the program advisory committee, develop and implement program evaluation procedures and data collection techniques that are reasonable and realistic for yearly evaluation purposes.

Civil Engineering Technology program faculty and administrative personnel work together to determine student enrollment, attrition, graduation, placement, and performance levels.

#### **Evaluative Criteria**

A procedure for continuous Civil Engineering Technology program evaluation is developed and implemented by the administration of the institution, the program faculty, and the program industrial advisory committee. Formal evaluation of the Civil Engineering Technology program is conducted and documented annually.

The Civil Engineering Technology program evaluation procedure is used to determine the extent to which program goals and objectives are achieved.

The Civil Engineering Technology program evaluation results are used to determine the adequacy of the existing program to meet current occupational needs.

The Civil Engineering Technology program evaluation procedure is used to ascertain the consistency of the philosophy, purpose, goals, and objectives of the program with those of the institution, the Georgia Board of Technical and Adult Education, and with ABET accreditation criteria.

### **CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program evaluation procedure includes review of student program evaluations, enrollment, attrition, graduation, placement, and student performance levels.

The Civil Engineering Technology program evaluation procedure includes consultation with the program industrial advisory committee, frequent communication with employers, analysis of placement and follow-up data, and collection of other information to evaluate and document program relevance.

Civil Engineering Technology program evaluation results are used to plan program improvements.

## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM EVALUATION AND PLANNING (Program Planning)**

#### **Standard Statement**

A written planning procedure is developed and implemented for the Civil Engineering Technology program.

#### **Explanatory Comment**

The Civil Engineering Technology program planning procedure allows responsiveness to the changing needs of the community and employment market.

The Civil Engineering Technology program is evaluated at the institutional level by the students, instructors, program industrial advisory committee, and administration; from this documented data, short-range and long-range program planning is developed.

#### **Evaluative Criteria**

A Civil Engineering Technology program planning procedure is developed and implemented by the administration of the institution and program faculty. Formal planning for the Civil Engineering Technology program is conducted and documented annually.

The Civil Engineering Technology program planning procedure utilizes program evaluation results to facilitate provision of program offerings of sufficient quality and scope to meet community and employment market needs.

The Civil Engineering Technology program planning procedure considers recommendations for program and course continuation, addition, deletion, and/or modification based on needs assessment information and input from the administration of the institution, the program faculty, and the program industrial advisory committee.

The Civil Engineering Technology program planning procedure considers information from appropriate national, state, and local governmental and non-governmental agencies.

**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program planning procedure considers information such as demographic studies, occupational surveys, current curricula, cost estimates, instructor availability, equipment needs, and projected enrollment figures that include special populations.

The Civil Engineering Technology program planning procedure satisfies the program planning requirements of the designated accrediting agency(ies).

The Civil Engineering Technology program planning procedure satisfies ABET program planning accreditation criteria.

**CIVIL ENGINEERING TECHNOLOGY**

**PROGRAM EVALUATION AND PLANNING  
(Enrollment, Graduation, and Placement Levels)**

**Standard Statement**

An evaluation of the enrollment, graduation, and placement levels of the Civil Engineering Technology program is conducted.

**Explanatory Comment**

Acceptable Civil Engineering Technology program outcomes (enrollment, graduation, and placement levels) are identified in the Evaluation, Planning, and Budgeting (EPB) model and are derived from ABET accreditation criteria.

**Evaluative Criteria**

Annual evaluation of Civil Engineering Technology program enrollment, graduation, and placement statistics is conducted and documented by the administration and program faculty.

Civil Engineering Technology program evaluation findings are compared with acceptable outcome levels designated for state evaluation requirements.

Factors contributing to the outcomes of the Civil Engineering Technology program are identified and analyzed. Where enrollment, graduation, and/or placement levels are unacceptable, appropriate corrective action is taken.



## **CIVIL ENGINEERING TECHNOLOGY**

### **PROGRAM EVALUATION AND PLANNING (Attrition Levels)**

#### **Standard Statement**

An analysis of the attrition level of the Civil Engineering Technology program is conducted and used in evaluating and improving the program.

#### **Explanatory Comment**

Attrition level is a measure of the number of students who withdraw from a program prior to completion of graduation requirements.

Attrition levels vary from one type of program to another depending on the nature of the program and the student population. The attrition level of the Civil Engineering Technology program is compared with relevant, available national norms and other data.

#### **Evaluative Criteria**

Annual evaluation of the attrition level of the Civil Engineering Technology program is conducted and documented by the program faculty.

Factors contributing to the attrition level are identified and analyzed, and appropriate corrective action is taken.

**CIVIL ENGINEERING TECHNOLOGY**

**PROGRAM EVALUATION AND PLANNING  
(Student Performance)**

**Standard Statement**

An evaluation of the Civil Engineering Technology program is conducted based on student achievement levels.

**Explanatory Comment**

Achievement levels are evaluated on the basis of verified student performance related to academic knowledge, occupational/technical knowledge, and performance skills.

Student achievement levels for the Civil Engineering Technology program are determined on the basis of student performance data gathered from tests which are locally developed and conducted during each program of study.

**Evaluative Criteria**

Annual evaluation of Civil Engineering Technology program student achievement levels is conducted and documented by the administration and program faculty.

Factors contributing to student achievement levels are identified and analyzed. Where achievement is low, corrective action is taken to improve the program.

## **CIVIL ENGINEERING TECHNOLOGY**

### **INSTRUCTIONAL PROGRAM (Course Content)**

#### **Standard Statement**

The essential content of each Civil Engineering Technology course is consistent statewide for courses having the same course identification code.

#### **Explanatory Comment**

Civil Engineering Technology course content consists of the body of knowledge generally accepted as appropriate professional practice.

Course content is defined in terms of competency areas taught. The program-specific standards of the Georgia Board of Technical and Adult Education detail the essential competency areas for each course identification code.

#### **Evaluative Criteria**

The content of each Civil Engineering Technology course having a given course identification code includes, but is not limited to, essential competency areas identified for that course identification code.

Competency areas included in each course reflect advances in the subject area and technical field and respond to student, community, and employment market needs.

The overall content of each course is consistent with established curricular program goals and objectives.

**CIVIL ENGINEERING TECHNOLOGY**

**INSTRUCTIONAL PROGRAM  
(Course Objectives)**

**Standard Statement**

Each Civil Engineering Technology course is constructed on the basis of course objectives.

**Explanatory Comment**

Course objectives are desired student performance outcomes stated in measurable performance terms.

The Civil Engineering Technology program faculty coordinates the planning of course objectives, outlines, and syllabi to facilitate program efficiency and consistency.

**Evaluative Criteria**

The objectives of each Civil Engineering Technology course are derived from established program objectives.

Civil Engineering Technology course outlines, syllabi, and lesson plans are based on course objectives and are used as exhibits documenting compliance with ABET accreditation criteria.

**CIVIL ENGINEERING TECHNOLOGY**

**INSTRUCTIONAL PROGRAM  
(Course Instruction)**

**Standard Statement**

Suitable instructional techniques and resources facilitate the fulfillment of the Civil Engineering Technology course objectives.

**Explanatory Comment**

A wide variety of instructional techniques and resources are used to direct student learning experiences.

**Evaluative Criteria**

Civil Engineering Technology course instruction is in accordance with ABET accreditation criteria and curricular guidelines.

Course outlines, syllabi, and lesson preparations serve to organize instruction in each Civil Engineering Technology program classroom and laboratory.

Civil Engineering Technology program instructional materials and equipment are in compliance with ABET accreditation criteria.

Teaching methods, materials, and procedures make provisions for individual differences, needs, and capabilities. Opportunities for remediation are provided to students as needed.

Student learning experiences include theoretical instruction and practical application of knowledge. The ratio of theoretical to practical instruction depends on the nature of program competencies.

Student progress is systematically monitored, evaluated, and recorded by the Civil Engineering Technology faculty as part of the instructional process.

Desirable employability skills are integrated into Civil Engineering Technology course instruction and are modeled by the instructor.

**CIVIL ENGINEERING TECHNOLOGY**

Collegiate academic skills integrated into Civil Engineering Technology course instruction are in compliance with ABET accreditation criteria and are modeled by the instructor.

A syllabus which outlines course objectives, requirements, content, and evaluation techniques is made available to students enrolled in each Civil Engineering Technology course.

Instructional methods are evaluated routinely, and evidence of improvement is collected and documented by the Civil Engineering Technology program faculty.

## CIVIL ENGINEERING TECHNOLOGY

### INSTRUCTIONAL PROGRAM (Occupation-Based Instruction)

#### Standard Statement

The Civil Engineering Technology program offers effective occupation-based instructional delivery where appropriate.

#### Explanatory Comment

Occupation-based instructional delivery systems include educational work experiences, internships, practicums, and other specialized and/or innovative learning arrangements.

Degree programs that require internships, work experience arrangements, or other occupation-based instructional experiences do so on the basis of designated essential competency areas and courses for the given program.

#### Evaluative Criteria

Civil Engineering Technology program occupation-based instruction is in compliance with ABET accreditation criteria.

Any internship, on-the-job training arrangement, or other educational work experience that is a Civil Engineering Technology program requirement or elective is:

- a) listed as a course having a course identification code;
- b) assigned course credit and required tuition;
- c) defined by the same requirements for statewide course title, course description, and essential competency areas as any other degree program course;
- d) controlled and supervised by the institution, program faculty, and/or the person designated to coordinate work experience courses; and
- e) managed through the use of prescribed individual training plans that detail required student learning and performance objectives, and appropriate agreements between institutions and work experience supervisors.

**CIVIL ENGINEERING TECHNOLOGY**

**INSTRUCTIONAL PROGRAM  
(Evaluation of Students)**

**Standard Statement**

A student evaluation system is developed and implemented by the Civil Engineering Technology program faculty.

**Explanatory Comment**

Evaluation of students is based on tests, observations, records, reports, projects, and/or other evidence of student performance.

**Evaluative Criteria**

The Civil Engineering Technology program system for evaluation of students is in compliance with ABET accreditation criteria.

The Civil Engineering Technology student evaluation system is consistent with institutional grading policies.

The Civil Engineering Technology program faculty develops, implements, and disseminates a written student evaluation system.

The Civil Engineering Technology program system for evaluation of students reflects the philosophy, purpose, goals, and objectives of the program.

The Civil Engineering Technology program system for evaluation of students requires use of competency-based measures of student performance.

The Civil Engineering Technology program system for evaluation of students requires use of both formative and summative evaluation.

The Civil Engineering Technology program system for evaluation of students includes evaluation and documentation of student achievement in the cognitive, affective, and psychomotor domains.



**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program system for evaluation of students includes evaluation and documentation of student competence in course specific knowledge and practical application.

The Civil Engineering Technology program system for evaluation of students is reviewed annually and revised, as necessary.

## CIVIL ENGINEERING TECHNOLOGY

### INSTRUCTIONAL PROGRAM (Grading System)

#### Standard Statement

The Civil Engineering Technology program implements statewide grading standards.

#### Explanatory Comment

The grading system of each Civil Engineering Technology program varies in detail but is consistent with other Civil Engineering Technology programs regarding major principles.

#### Evaluative Criteria

The Civil Engineering Technology program grading system complies with ABET accreditation criteria.

The Civil Engineering Technology program faculty develops, implements, and disseminates a written grading system consistent with statewide grading standards.

The grading system of the Civil Engineering Technology program reflects the objectives of the program.

The Civil Engineering Technology program grading system is used to promote student awareness of learning progress.

The Civil Engineering Technology program grading system bases grades in occupational/technical courses on documented measures of student knowledge, practical application of knowledge, and employability skills.

The Civil Engineering Technology program grading system establishes passing grades that document student achievement of course competencies at levels acceptable for job entry.

The Civil Engineering Technology program grading system requires use of a system whereby 90 to 100% is an A, 80 to 89% is a B, 70 to 79% is a C, 65 to 69% is a D, and 0 to 64% is an F.

**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology grading system requires the minimum course grade of C for progress from certain specified courses to more advanced courses.

The Civil Engineering Technology program grading system is evaluated annually by the program faculty and revised, as needed.

**CIVIL ENGINEERING TECHNOLOGY**

**INSTRUCTIONAL PROGRAM  
(Laboratory Management)**

**Standard Statement**

A system for instructional laboratory management is developed and implemented by the Civil Engineering Technology program faculty.

**Explanatory Comment**

An established laboratory management system facilitates productive instructional laboratory operation.

The system addresses the management of materials, equipment, and student learning activities within the Civil Engineering Technology laboratory.

The instructional content of the Civil Engineering Technology program laboratory is addressed by ABET accreditation criteria.

**Evaluative Criteria**

The Civil Engineering Technology program faculty develops and implements a written laboratory management system.

The Civil Engineering Technology program laboratory management system is disseminated to program students and faculty.

Institutional policies regarding safety, liability, and laboratory operation are reflected in the Civil Engineering Technology program laboratory management procedures.

The Civil Engineering Technology program laboratory management system is consistent with the goals and objectives of the program.

The Civil Engineering Technology program laboratory management system maximizes the instructional usefulness of student laboratory experiences. The laboratory management system is designed to meet student needs in learning program competencies.

### **CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program laboratory management system complies with and stresses safety practices, requires that safety instruction precede laboratory work, integrates safety into laboratory instruction, and establishes required safety tests.

The Civil Engineering Technology program laboratory management system is developed using input from program faculty, program industrial advisory committee members, and, when possible, students.

The Civil Engineering Technology program laboratory management system is evaluated annually and revised by the program faculty, as needed.

## CIVIL ENGINEERING TECHNOLOGY

### INSTRUCTIONAL PROGRAM (Equipment, Supplies, and Materials)

#### Standard Statement

The furnishings, equipment, supplies, and materials for the Civil Engineering Technology program are sufficient, appropriate, and adequately maintained to support safe and effective instruction.

#### Explanatory Comment

The Civil Engineering Technology program equipment, supplies, and materials include items used in industry and items used in the delivery of instruction.

#### Evaluative Criteria

Civil Engineering Technology program equipment, supplies, and materials are in compliance with ABET accreditation criteria.

Current and adequately maintained furnishings, equipment, tools, supplies, and materials are available to meet the instructional goals and performance objectives of the Civil Engineering Technology program.

Students in the Civil Engineering Technology program are helped to develop transferable occupational skills by using instructional equipment, tools, materials, and supplies that are comparable to those currently used in the occupation. Tools and equipment meet industry quality standards.

The furnishings, equipment, supplies, and materials used in the Civil Engineering Technology program meet local, state, and federal health and safety standards.

The Civil Engineering Technology program makes provisions to ensure that all health and safety equipment, fixtures, materials, and supplies required by local codes, state law, and professional practice are available and maintained in working order.

The Civil Engineering Technology program requires that applicable personal safety, devices, instruments, and supplies are available, utilized, and maintained in working order.

### CIVIL ENGINEERING TECHNOLOGY

First aid supplies are appropriate for the program and are available throughout the Civil Engineering Technology program area.

Equipment, supplies, and materials in the Civil Engineering Technology program are installed, color coded, controlled, ventilated, and/or stored in accordance with applicable health and safety codes.

The Civil Engineering Technology program implements an equipment, materials, and supplies management system that describes proper procedures for purchasing, maintaining, locating, storing, inventorying, securing, distributing, repairing, replacing, and safely using instructional items.

The Civil Engineering Technology program utilizes its program industrial advisory committee and other inputs in implementing annual evaluation and planning procedures to maintain or improve the adequacy, safety, and management of equipment, materials, and supplies.

## **CIVIL ENGINEERING TECHNOLOGY**

### **INSTRUCTIONAL PROGRAM (Physical Facility)**

#### **Standard Statement**

The Civil Engineering Technology program is provided with adequate and appropriate facilities.

#### **Explanatory Comment**

The facilities for the Civil Engineering Technology program vary depending on enrollments, learning activities involved, instructional equipment used, and other factors.

#### **Evaluative Criteria**

The Civil Engineering Technology facility is in compliance with ABET accreditation criteria.

Space allocations for the Civil Engineering Technology program are appropriate for the number of students enrolled and the type of instructional activity involved.

The physical facilities for the Civil Engineering Technology program are designed to facilitate instructional delivery, allow program flexibility, accommodate instructional management, protect students and staff against safety hazards, protect equipment from damage, provide accessibility to all students, and create a positive atmosphere for effective learning.

The physical facilities for the Civil Engineering Technology program are arranged to separate noise producing activities from those that require a quiet environment, expedite student traffic flow, and prevent disruption of instruction.

Water, electricity and other utilities are safely and conveniently provided to the Civil Engineering Technology program on the basis of instructional needs.

The Civil Engineering Technology program is provided with lighting, heating, cooling, ventilation, and any specialized control systems needed to maintain healthy and safe working conditions and meet instructional requirements.



### **CIVIL ENGINEERING TECHNOLOGY**

The physical facilities for the Civil Engineering Technology program include classrooms, laboratories, and/or other specialized learning areas needed to meet instructional requirements.

The institution provides adequate and appropriate non-instructional facilities including offices, restrooms, storage areas, a first aid station, and any other specialized areas needed to meet program needs.

The facility for the Civil Engineering Technology program is maintained regularly and operated effectively and cost efficiently.

The Civil Engineering Technology program faculty and program industrial advisory committee conduct an annual facility evaluation which contributes to the overall institutional facility review process.

## **CIVIL ENGINEERING TECHNOLOGY**

### **ACADEMIC SKILLS (Academic Requirements)**

#### **Standard Statement**

Academic achievement standards are established for the Civil Engineering Technology program.

#### **Explanatory Comment**

Developmental studies assist provisionally admitted students to improve their understanding and performance in the skills areas of language usage, reading, and mathematics prior to regular program enrollment.

Academic standards reflect the levels of math, English, and reading skills necessary for successful employment in the civil engineering technology field.

#### **Evaluative Criteria**

The Civil Engineering Technology program utilizes academic achievement standards for admission that reflect skills necessary for successful participation in the instructional program.

The institution offers a required Civil Engineering Technology general core curriculum consisting of collegiate academic instruction.

Opportunities for academic remediation are provided to Civil Engineering Technology students while enrolled in program courses.

The Civil Engineering Technology program utilizes academic and evaluation achievement standards that reflect skills necessary for successful performance on the job.

Where a state approved evaluation has not been established, final evaluation of essential academic skills is conducted according to standards developed by local program faculty.

## CIVIL ENGINEERING TECHNOLOGY

### EMPLOYABILITY SKILLS (Job Acquisition)

#### Standard Statement

Job acquisition competency areas are integrated into the curriculum of the Civil Engineering Technology program.

#### Explanatory Comment

Employability skills refer to the basic academic, interpersonal, reasoning, and problem solving skills that, when transferred to the occupational setting, facilitate job acquisition, retention, and advancement.

Job acquisition competency areas consist of essential employability skills that directly influence the ability to obtain employment.

#### Evaluative Criteria

The Civil Engineering Technology program faculty ensures that job acquisition competency areas are included in the curriculum.

Job acquisition competency areas include, but are not limited to, the following:

- a) job search;
- b) job application and resume preparation;
- c) interviewing; and
- d) job marketing.

Job acquisition skills included in the Civil Engineering Technology curriculum are in accordance with ABET accreditation criteria and curricular guidelines.

The Civil Engineering Technology program faculty utilizes job follow-up data, current research, and the expertise of the program advisory committee to evaluate and update the delivery of program employability skills training.

The Civil Engineering Technology program faculty assists in providing student employment information to the job placement office.

**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program faculty encourages and guides students in preparing occupationally appropriate job acquisition and job marketing materials.

The media collection includes multi-media employability information appropriate for classroom and individual student use.

## **CIVIL ENGINEERING TECHNOLOGY**

### **STAFF (Faculty Qualifications and Responsibilities)**

#### **Standard Statement**

Qualified staff are responsible for carrying out the purpose, goals, and objectives of the Civil Engineering Technology program.

#### **Explanatory Comment**

Staff development opportunities designed to increase proficiency include industry based or other appropriate learning experiences.

#### **Evaluative Criteria**

The qualifications of each Civil Engineering Technology part-time or full-time faculty member meet the requirements **specified** in the Certification Manual of the Georgia Board of Technical and Adult Education, as appropriate, and the requirements of the designated accrediting agency(ies).

The responsibilities of each Civil Engineering Technology program faculty member comply with the requirements **specified** in the Georgia Board of Technical and Adult Education Policy Manual and **are in conformance** with the requirements of the designated accrediting agency(ies).

Civil Engineering Technology program faculty use annual staff development opportunities to assure achievement of occupational and instructional competency.

## **CIVIL ENGINEERING TECHNOLOGY**

### **ADVISORY COMMITTEE (Function)**

#### **Standard Statement**

The Civil Engineering Technology program industrial advisory committee provides expert support for the program.

#### **Explanatory Comment**

A program industrial advisory committee is established to promote interaction between the program and businesses and industries served by the program.

Faculty use the expertise of the program industrial advisory committee to improve program content and operation.

#### **Evaluative Criteria**

The Civil Engineering Technology program industrial advisory committee complies with ABET accreditation criteria.

The Civil Engineering Technology program industrial advisory committee assists in evaluation of program effectiveness, job development, job placement, program promotion, evaluation in relation to standards, program advocacy, and industrial support of the program.

The Civil Engineering Technology program industrial advisory committee submits its recommendations regarding program related changes to the appropriate state-level technical committee for review on an annual basis.

The Civil Engineering Technology program faculty provides documented evidence that program industrial advisory committee recommendations are considered and specific action is taken on each recommendation.

## CIVIL ENGINEERING TECHNOLOGY

### ADVISORY COMMITTEE (Membership)

#### Standard Statement

The membership of the Civil Engineering Technology program industrial advisory committee is representative of the community and employment market served by the program.

#### Explanatory Comment

The Civil Engineering Technology program industrial advisory committee is composed primarily of practicing engineers and senior engineering technicians. Other persons within the community and employment market who positively impact the program are also included.

#### Evaluative Criteria

The Civil Engineering Technology program industrial advisory committee membership complies with ABET accreditation criteria.

The Civil Engineering Technology program faculty, in cooperation with the administration of the institution, selects the program industrial advisory committee.

The Civil Engineering Technology program industrial advisory committee includes a cross-section of representatives from program-related businesses and industries.

The Civil Engineering Technology program industrial advisory committee includes program-related business and industry representatives who have varying occupational positions.

The Civil Engineering Technology program industrial advisory committee includes faculty as ex officio members.

The Civil Engineering Technology program industrial advisory committee is comprised of a minimum of five members.

**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program industrial advisory committee maintains a base of experienced members while acquiring new members.

The Civil Engineering Technology program industrial advisory committee members are recognized for their dedication and effort to improve the quality of education.



## CIVIL ENGINEERING TECHNOLOGY

### ADVISORY COMMITTEE (Meetings)

#### Standard Statement

Civil Engineering Technology program industrial advisory committee meetings have a planned program of work.

#### Explanatory Comment

Regularly scheduled formal Civil Engineering Technology program industrial advisory committee meetings focus on planning, developing, implementing, and evaluating the program.

#### Evaluative Criteria

The Civil Engineering Technology program industrial advisory committee has an annual program of work on file.

The Civil Engineering Technology program industrial advisory committee meets a minimum of two (2) times annually on a scheduled basis.

The Civil Engineering Technology program industrial advisory committee elects officers, including a chairperson and a secretary.

The Civil Engineering Technology program industrial advisory committee follows an agenda which is distributed to members prior to each meeting.

The Civil Engineering Technology program industrial advisory committee chairperson assists program faculty in developing the agenda for each meeting.

The Civil Engineering Technology program industrial advisory committee maintains minutes indicating date, agenda, members present, and recommendations.

Minutes are distributed to each Civil Engineering Technology program industrial advisory committee member prior to each meeting.

**CIVIL ENGINEERING TECHNOLOGY**

The Civil Engineering Technology program industrial advisory committee maintains an open file of minutes and other necessary documents for a minimum of three years.

The Civil Engineering Technology program industrial advisory committee members are invited to make periodic classroom visits to the institution.

The Civil Engineering Technology program industrial advisory committee has a quorum present to conduct business.

## CIVIL ENGINEERING TECHNOLOGY

### **SPECIAL NEEDS (Commitment)**

#### Standard Statement

The Civil Engineering Technology program is committed to providing technical education to special needs students.

#### Explanatory Comment

Special needs students are those who are academically and/or economically disadvantaged, are physically and/or mentally handicapped, or are national origin minority students with limited English language skills.

The special needs requirements of the Georgia Board of Technical and Adult Education meet or exceed all relevant local, state, and federal legislation.

Special needs legislation includes, but is not limited to, mandates for auxiliary aids to students, where needed, removal of architectural and equipment barriers, and non-restrictive career counseling.

#### Evaluative Criteria

Special needs policies and operational procedures that comply with current local, state, and federal special needs legislation are implemented in the Civil Engineering Technology program.

Students who are academically and/or economically disadvantaged are provided special services and assistance to enable them to succeed in the Civil Engineering Technology program.

Students who have physical and/or mental impairments are provided special services and assistance to enable them to succeed in the Civil Engineering Technology program.

Students who are national origin minority students with limited English language skills are provided special services and assistance to enable them to succeed in the Civil Engineering Technology program.

**CIVIL ENGINEERING TECHNOLOGY**

Civil Engineering Technology program faculty are prepared, through staff development education, to provide assistance for students with special needs.

All special needs personnel meet Georgia Board of Technical and Adult Education certification requirements.

Course objectives within the program are utilized as the basis for developing an Individualized Education Program (IEP) for each handicapped student under 21 years of age enrolled in the Civil Engineering Technology program.

**CIVIL ENGINEERING TECHNOLOGY**

**EQUITY  
(Commitment)**

**Standard Statement**

The Civil Engineering Technology program affords equal access and opportunities to all qualified students and staff.

**Explanatory Comment**

Equal access and equal opportunity refer to the prohibition of discrimination on the basis of race, color, national origin, religion, sex, age, or handicapping condition in educational programs, activities, and employment.

The equal access and equal opportunity requirements of the Georgia Board of Technical and Adult Education meet or exceed all relevant state and federal legislation.

Equal access and equal opportunity legislation includes, but is not limited to, mandates for: equitable admissions practices, counseling, employment, grievance procedures, and leave; nondiscriminatory recruitment and promotional materials; and public notification of nondiscrimination.

**Evaluative Criteria**

The nondiscrimination commitment of the Civil Engineering Technology program complies with current Georgia Board of Technical and Adult Education Policy and state and federal law.

A written institutional policy that ensures equal access to all qualified students who can safely benefit from instructional services regardless of race, color, national origin, religion, sex, age, or handicapping condition is implemented in the Civil Engineering Technology program.

## **CIVIL ENGINEERING TECHNOLOGY**

### **HEALTH AND SAFETY (Commitment)**

#### **Standard Statement**

The Civil Engineering Technology program provides a safe and healthy environment for students and staff.

#### **Explanatory Comment**

References for proper health and safety conditions, equipment, practices, and procedures are available in Georgia Board of Technical and Adult Education policy and local, state, and federal law. Emergency and disaster plans, accident reports, and fire drill procedures are outlined in information from the State Fire Marshall's Office, the Civil Defense Division, and the Georgia Department of Human Resources.

Health and safety facility and equipment provisions required by the Georgia Board of Technical and Adult Education meet or exceed local, state, and federal law.

#### **Evaluative Criteria**

The physical facility, furnishings, equipment, supplies, and practices of the Civil Engineering Technology program meet or exceed appropriate local, state, and federal health and safety standards.

Proper health and safety practices are developed, implemented, and integrated into the Civil Engineering Technology program.

The Georgia Board of Technical and Adult Education does not discriminate on the basis of age, sex, race, color, religion, national origin, or handicap in its educational programs, activities, or employment policies.